



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 11/719,469 | 04/15/2009 | Richard P. Rusin | 60195US006 | 8192 |

32692 7590 01/31/2017
3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

| |
|----------|
| EXAMINER |
|----------|

PEPITONE, MICHAEL F

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1767

| | |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

01/31/2017

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RICHARD P. RUSIN, SUMITA B. MITRA
and KEVIN M. CUMMINGS

Appeal 2016-002470
Application 11/719,469
Technology Center 1700

Before JEFFREY T. SMITH, KAREN M. HASTINGS, and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 57–61, 63–69, 92, 95, 100, 103, and 104. We have jurisdiction under 35 U.S.C. § 6.

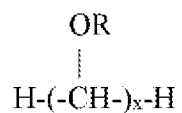
We REVERSE.

Claim 57 is illustrative of the subject matter on appeal and is reproduced below:

57. A dental composition comprising:

a hardenable resin comprising water, wherein the hardenable resin is polymerizable and/or crosslinkable; and

a phosphate salt of the formula:



where $x=2-4$;

each R is independently H or $\text{P}(\text{O})(\text{O}^-)_2(\text{M}^{+n})_{2/n}$, with the proviso that at least one R group is $\text{P}(\text{O})(\text{O}^-)_2(\text{M}^{+2n})_{2/n}$ and at least one R group is H; and

M is a metal of valence n,

wherein the phosphate salt is dissolved in the hardenable resin of the dental composition.

Appellants (App. Br. 4) request review of the following rejections from the Examiner's Final Action:

I. Claims 57–61, 63–69, 95, 100, 103, and 104 rejected under 35 U.S.C. § 103(a) as unpatentable over GB '318 (GB 1,532,318 to Beiersdorf A.G., published November 15, 1978) and Rijke (US 4,141,864, issued February 27, 1979).

II. Claim 92 rejected under 35 U.S.C. § 103(a) as unpatentable over GB '318, Rijke and Muller (US 2004/0138759 A1, published July 15, 2004).

OPINION¹

After review of the respective positions provided by Appellants and the Examiner, we REVERSE the Examiner's prior art rejections of claims 57–61, 63–69, 92, 95, 100, 103, and 104 under 35 U.S.C. § 103(a) for the reasons presented by Appellants. We add the following.

Independent claim 57 is directed to a dental composition comprising a hardenable resin and a phosphate salt dissolved in the hardenable resin of the dental composition. Spec. 2.

We refer to the Examiner's Final Action for a statement of the rejection. Final Act. 3–4.

The premise of Appellants' arguments is that the aqueous nature of the cement composition of GB '318 would dissolve the solid soluble particles of Rijke into the resin before the resin is hardened and, thus, the resulting hardened resin from the combined teachings would not exhibit the various benefits disclosed by Rijke. App. Br. 3–6; GB '318 1–2; Rijke col. 4, ll. 22–30, 40–47; col. 6, ll. 60–62. According to Appellants, the cement

¹ We limit our discussion to independent claim 57.

compositions of Rijke have solid soluble particles, such as calcium glycerophosphate, admixed therein that result in the benefits of eliminating thermal necrosis, curtailing the introduction of toxic quantities of monomers and forming a high strength bond, all benefits relied upon by the Examiner as motivation to combine the teachings of the cited art. App. Br. 3–4; Rijke col. 4, ll. 22–30, 40–47; col. 6, ll. 60–62. Appellants further argue calcium glycerophosphate particles are dissolvable in water and the Examiner has not shown Rijke’s compositions to include water. App. Br. 4–5.² Appellants assert Rijke discloses these particles provide the stated benefits while the resin hardens and before they are dissolved and leached away with the extracellular fluid. App. Br. 4; Rijke col. 4, ll. 3–47. That is, Appellants argue Rijke does not disclose nor desires dissolving the solid soluble particles into the resin of the cement composition. Thus, Appellants argue adding the solid soluble particles of Rijke to the aqueous cement composition of GB ‘318 would result in the particles being dissolved before the resin is hardened and before the particles are able to provide the benefits the Examiner relies upon to support the rejection. App. Br. 5–6; Rijke col. 4, ll. 8–11, 22–30, 40–47.

We agree with Appellants. As noted above, Appellants presented a reasonable technical argument why one skilled in the art would not have combined the solid soluble particles of Rijke with the aqueous cement composition of GB ‘318. App. Br. 3–6. The Examiner did not address this technical argument in the Answer. Thus, absent impermissible hindsight,

² Appellants rely on property information for calcium glycerophosphate taken from *The Merck Index*, 13th edition, O’Neil, M.J, et al., ed., Merck & Co., Inc., Whitehouse Station, NJ, page 280 (2001). App. Br. 5.

the Examiner has not adequately explained why one skilled in the art would have added the solid soluble particles of Rijke to the aqueous cement composition of GB ‘318 when Rijke discloses removing these soluble solid particles after the resin hardens by dissolving them with into an extracellular fluid and leaching them out. Rijke col. 3, ll. 45–50; col. 4, ll. 3–5; col. 7, ll. 1–27.

Under these circumstances, we cannot conclude that the Examiner has met the minimum threshold of establishing obviousness under 35 U.S.C.

§ 103(a). *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Accordingly, we reverse the Examiner’s prior art rejections under 35 U.S.C. § 103(a) for the reasons presented by Appellants and given above.

ORDER

The Examiner’s prior art rejections under 35 U.S.C. § 103(a) are reversed.

REVERSED